

In the Claims

Claims 1 - 23 (Cancelled)

24. (New) A process for transmitting data on an optical fiber comprising multiplexing in wavelength signals coming from a plurality of monochrome transmitters, each of which has its own wavelength, and modulating information to be transmitted by a carrier realized per channel, wherein timing (clocking) of each transmitter is controlled by a common clock.

25. (New) The process according to claim 24, further comprising formatting the data that is common and simultaneous for all carriers.

26. (New) The process according to claim 25, wherein the formatting comprises optimizing the form of the signal as a function of characteristics of propagation of an associated transport means.

27. (New) The process according to claim 25, wherein the formatting comprises optimizing optical parameters of the signal as a function of the characteristics of propagation of an associated transport means.

28. (New) The process according to claim 25, wherein the formatting comprises an operation of stabilizing temporal parameters of data.

29. (New) The process according to claim 24, comprising synchronizing streams (pulses) emitted by the transmitters.

30. (New) The process according to claim 24, wherein the formatting comprises aligning the phase of signals generated by the transmitters.

31. (New) The process according to claim 30, wherein the aligning is subject to ambient parameters to compensate for temporal signal variations.

32. (New) The process according to claim 30, wherein the aligning is subject to ambient parameters to compensate for differences and variations between optical paths.

33. (New) The process according to claim 24, wherein each element of the multiplex is signed before multiplexing by a frequency marker applied on the phase.

34. (New) The process according to claim 24, wherein each element of the multiplex is signed before multiplexing by a frequency marker applied on the amplitude.

35. (New) The process according to claim 34, wherein the marker comprises a signal with a predetermined spectrum.

36. (New) The process according to claim 34, wherein the marker comprises a signal with a spectrum whose characteristics are a function of disturbances undergone by the signal on a corresponding path.

37. (New) The process according to claim 34, wherein characteristics of the marker are determined to disturb a marked signal in such a manner that marking is evanescent during passage through the gate.

38. (New) Apparatus for transmitting data on an optical fiber comprising:
a plurality of monochrome transmitters, each of which has its own transmission wavelength,
with each transmitter having a slave clock;
a multiplexer; and
a master clock controlling the slave clocks.

39. (New) The apparatus according to claim 38, further comprising an optical gate that receives a multiplex of optical carriers and a cutting signal produced by the master clock.

40. (New) The apparatus according to claim 38, further comprising frequency marking circuits for each element of the multiplex.

41. (New) The apparatus according to claim 40, wherein each of the frequency marking circuits applies the marking signal onto one of the transmitters.

42. (New) The apparatus according to claim 40, wherein each of the frequency marking circuits applies the marking signal onto synchronizer of each path.

43. (New) The apparatus according to claim 39, wherein the optical gate comprises a detector for each marker to control characteristic of the formatting and adjustment of the phase of a corresponding path.

44. (New) The apparatus according to claim 39, wherein the optical gate comprises a spectral analyzer for the marker to adjust the phase of each path.

45. (New) The apparatus according to claim 38, further comprising an optical converter, a demultiplexer and a clock connected to at least one of the converters.

46. (New) A counter-reaction circuit for apparatus that transmits data on an optical fiber and which generates a frequency marker for injecting a disturbing spectral signal of a transmitter comprising a detector for an output signal of a gate that acts on an automatic controller of a transmitter phase that obtains a selected spectral transformation of each marker.